Medical
Wahr

CONTENTS.

No. 1, SEPTEMBER 20, 1926.

PAGE

NOYES, HELEN MILLER, LORBERBLATT, I., and FALK, K. GEORGE. Studies on enzyme action. XXXVIII. The ester-hydrolyzing actions of the whole eel 1

REZNIKOFF, PAUL. Micrurgical studies in cell physiology. II. The action of the chlorides of lead, mercury, copper, iron, and aluminum on the protoplasm of *Amœba proteus* 9

BRONFENBRENNER, JACQUES J. A simple electro-ultrafilter 23

GAINES, W. L. Interpretation of the lactation curve 27

HOVER, J. MILTON, and GUSTAFSON, FELIX G. Rate of respiration as related to age 33

MACHT, DAVID I. Concerning the influence of polarized light on the growth of seedlings 41

CROZIER, W. J. On curves of growth, especially in relation to temperature 53

IRWIN, MARIAN. Exit of dye from living cells of *Nitella* at different pH values 75

HARVEY, E. NEWTON. Further studies on the inhibition of *Cypridina* luminescence by light, with some observations on methylene blue 103

BROWN, L. A. Temperature characteristics for duration of an instar in cladocerans 111

HOAGLAND, D. R., HIBBARD, P. L., and DAVIS, A. R. The influence of light, temperature, and other conditions on the ability of *Nitella* cells to concentrate halogens in the cell sap .. 121

EGGERTH, ARNOLD H. The effect of the pH on the germicidal action of soaps 147

NORTHROP, JOHN H., and KUNITZ, M. The swelling pressure of gelatin and the mechanism of swelling in water and neutral salt solutions 161

HITCHCOCK, DAVID I. The effect of pH on the permeability of collodion membranes coated with protein 179

PAGE

CROZIER, W. J., and STIER, T. J. B. Temperature characteristics for speed of movement of thiobacteria. 185

CROZIER, W. J., and PINCUS, G. Stereotropism in rats and mice. 195

No. 2, NOVEMBER 20, 1926.

DAVENPORT, CHARLES B. Human growth curve. 205

MERRILL, HENRY BALDWIN. The effect of enzyme purity on the kinetics of tryptic hydrolysis. 217

FRIES, E. F. B. Temperature and frequency of heart beat in the cockroach. 227

GALTSOFF, P. S., and PERTZOFF, VLADIMIR. Some physicochemical properties of dissociated sponge cells. 239

CROZIER, W. J., and PINCUS, G. The geotropic conduct of young rats. 257

IRWIN, MARIAN. The penetration of basic dye into *Nitella* and *Valonia* in the presence of certain acids, buffer mixtures, and salts. 271

COOK, S. F. The rôle of certain metallic ions as oxidation catalysts. 289

STEARN, ALLEN E. Amphoteric behavior of complex systems. I. Theoretical. 313

STEARN, ALLEN E. Amphoteric behavior of complex systems. II. Titration of sulfanilic acid-glycine mixtures. 325

MURRAY, HENRY A., JR. Physiological ontogeny. A. Chicken embryos. XII. The metabolism as a function of age. 337

IRVING, LAURENCE. Regulation of the hydrogen ion concentration and its relation to metabolism and respiration in the starfish. 345

No. 3, JANUARY 20, 1927.

FALK, K. GEORGE, and NOYES, HELEN MILLER. Studies on enzyme action. XXXIX. Lipase actions of extracts of the whole mouse at different ages. 359

STEARN, ALLEN E. Amphoteric behavior of complex systems. III. The conductivity of sulfanilic acid-lysin mixtures. 369

PAGE

STEARN, ALLEN E. Amphoteric behavior of complex systems. IV. Note on the isoelectric point and ionization constants of sulfanilic acid 379

HARVEY, E. NEWTON. The oxidation-reduction potential of the luciferin-oxyluciferin system 385

CROZIER, W. J. Galvanotropism and "reversal of inhibition" by strychnine 395

CROZIER, W. J., and PINCUS, G. Phototropism in young rats 407

CROZIER, W. J., and PINCUS, G. On the equilibration of geotropic and phototropic excitations in the rat 419

IRWIN, MARIAN. Certain effects of salts on the penetration of brilliant cresyl blue into *Nitella* 425

MCFARLANE, JENNIE, DUNBAR, VIOLET E., BORSOOK, HENRY, and WASTENEYS, HARDOLPH. The stages of the peptic hydrolysis of egg albumin 437

GOULDING, ARTHUR M., BORSOOK, HENRY, and WASTENEYS, HARDOLPH. The autodestruction of pepsin in relation to its ionization 451

NO. 4, MARCH 20, 1927.

EMERSON, ROBERT. The effect of certain respiratory inhibitors on the respiration of *Chlorella* 469

CROZIER, W. J., and STIER, T. J. B. Thermal increments for pulsation-frequency in "accessory hearts" of *Notonecta* 479

CROZIER, W. J., and STIER, T. J. B. Temperature and frequency of cardiac contractions in embryos of *Limulus* 501

CROZIER, W. J., and PINCUS, G. Geotropic orientation of young rats 519

PINCUS, G. Geotropic creeping of young rats 525

BODINE, JOSEPH HALL. Potentiometric studies on intracellular pH values of single *Fundulus* egg cells 533

COULTER, CALVIN B. The precise measurement of hemolysin 541

COULTER, CALVIN B. The protein associated with hemolysin in rabbit serum and plasma 545

NAVEZ, A. E. "Galvanotropism" of roots 551

PAGE

BURK, DEAN. The free energy of nitrogen fixation by living forms 559

MICHAELIS, L., and PERLZWEIG, W. A. Studies on permeability of membranes. I. Introduction and the diffusion of ions across the dried collodion membrane 575

LYON, CHARLES J. Phosphate ion as a promoter catalyst of respiration 599

LYON, CHARLES J. Arsenate as a catalyst of oxidation 617

No. 5, MAY 20, 1927.

CLARK, HARRY. A theoretical consideration of the action of x-rays on the protozoan *Colpidium colpoda* 623

BRODY, SAMUEL. Time relations of growth. III. Growth constants during the self-accelerating phase of growth 637

MCCUTCHEON, MORTON, and LUCKE, BALDWIN. The kinetics of exosmosis of water from living cells 659

LUCKE, BALDWIN, and MCCUTCHEON, MORTON. The effect of salt concentration of the medium on the rate of osmosis of water through the membrane of living cells 665

MICHAELIS, L., ELLSWORTH, R. MCL., and WEECH, A. A. Studies on the permeability of membranes. II. Determination of ionic transfer numbers in membranes from concentration chains 671

MICHAELIS, L., WEECH, A. A., and YAMATORI, A. Studies on the permeability of membranes. III. Electric transfer experiments with the dried collodion membrane 685

LILLIE, RALPH S. The activation of starfish eggs by acids. II. The action of substituted benzoic acids and of benzoic and salicylic acids as influenced by their salts 703

MURRAY, CECIL D. A relationship between circumference and weight in trees and its bearing on branching angles 725

REZNIKOFF, PAUL, and CHAMBERS, ROBERT. Micrurgical studies in cell physiology. III. The action of CO_2 and some salts of Na, Ca, and K on the protoplasm of *Amœba dubia* 731

CHAMBERS, ROBERT, and POLLACK, HERBERT. Micrurgical studies in cell physiology. IV. Colorimetric determination of the nuclear and cytoplasmic pH in the starfish egg 739

PAGE

WOLF, ERNST. Geotropism of *Agriolimax*..... 757
FENN, WALLACE O. The oxygen consumption of frog nerve during stimulation..... 767
HECHT, SELIG. The kinetics of dark adaptation..... 781
KUNITZ, M. Hydration of gelatin in solution..... 811

No. 6, JULY 20, 1927.

FALK, K. GEORGE, NOYES, HELEN MILLER, and LORBERBLATT, I. Studies on enzyme action. XLV. Lipase actions of the whole trout at different ages..... 837
NOYES, HELEN MILLER, LORBERBLATT, I., and FALK, K. GEORGE. Studies on enzyme action. XLVI. The ester-hydrolyzing actions of whole trout preparations under various conditions. 845
RICHARDS, OSCAR W., and DAWSON, J. A. The analysis of the division rates of ciliates..... 853
STEVENS, KENNETH P. Studies on the amount of light emitted by mixtures of *Cypridina* luciferin and luciferase..... 859
HARVEY, E. NEWTON. On the quanta of light produced and the molecules of oxygen utilized during *Cypridina* luminescence.. 875
NORTHROP, JOHN H. The kinetics of osmosis..... 883
NORTHROP, JOHN H. The swelling of isoelectric gelatin in water. I. Equilibrium conditions..... 893
NORTHROP, JOHN H., and KUNITZ, M. The swelling of isoelectric gelatin in water. II. Kinetics..... 905
IRWIN, MARIAN. On the nature of the dye penetrating the vacuole of *Valonia* from solutions of methylene blue..... 927
GOWEN, JOHN W., and TOBEY, ELMER R. Udder size in relation to milk secretion..... 949
PERTZOFF, VLADIMIR. The effect of temperature upon some of the properties of casein..... 961
PERTZOFF, VLADIMIR. The effect of rennin upon casein. I. The solubility of paracasein in sodium hydroxide..... 987
INDEX TO VOLUME X..... 1007